

ABSTRACT

Data compression and reconstruction methods and apparatuses for a hard copy device are provided. The data compression method of compressing source image data, which is used for hard copying a bilevel screened image and stored in a memory in units of bytes, for a hard copy device, includes the steps of transposing bytes at each column to bytes at each row in the source image data; and entropy encoding sequential chains, which include a current chain to be compressed and a chain or chains succeeding the current chain, or the current chain depending on whether a chain having the same value as that of the current chain exists in a dictionary composed of previous chains compressed before, and determining the result of the entropy encoding as the result of the compression. Neighboring bytes at each row have neighboring memory addresses. The offset of neighboring bytes at each column corresponds to the row width of the source image data. Start information containing information on a chain which compression is performed on the source image data starting from and header information are determined before the latter step and included in the result of the compression, and each chain is composed of at least two consecutive bytes at a row. Transposition is performed before entropy decoding source image data, thereby improving the compression ratio, and the size of a template can be arbitrarily controlled, thereby improving the compression speed.